

a first data access device, to be coupled to cabling of the data home network, for extracting data packets from the cabling and for feeding ~~the~~ data packets into the cabling, while avoiding adverse effects on an actual intended purpose of the cabling; and

a second data access device, to be coupled to a transmission medium of the local area network, for extracting ~~the~~ data packets from the local area network and for feeding ~~the~~ data packets into the local area network; and

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a data transmission device operating on a data link layer of the OSI reference model and coupled to said first data access device and to said second data access device, said data transmission device providing an unchanged transmission of extracted data packets between said first data access device and said second data access device without evaluating addressing information concerning the data link layer contained in the data packets.

Claim 2 (currently amended). The network coupling device according to claim 1, wherein the data-network cabling is a cabling of a telephone system and said first data access device is provided for extracting ~~the~~ data packets from the

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cabling of the telephone system and for feeding ~~the~~ data packets into the cabling of the telephone system.

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Claim 3 (currently amended). The network coupling device according to claim 1, wherein the cabling is a power supply cabling and said first data access device is provided for extracting data packets from the power supply cabling and feeding ~~the~~ data packets into the power supply cabling.

Claim 4 (original). The network coupling device according to claim 1, wherein said data transmission device has a buffer memory for buffer-storing the extracted data packets before their transmission to one of said first data access device and said second data access device.

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Claim 5 (original). The network coupling device according to claim 4, wherein said buffer memory is a first-in-first-out memory.

Claim 6 (original). The network coupling device according to claim 4, wherein said buffer memory is a dual-port random access memory.

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Claim 7 (currently amended). The network coupling device according to claim 1, wherein said data transmission device has, both for a transmission direction from said first data

access device to said second data access device and for an opposite transmission direction, a respective buffer memory for buffer-storing the data packets to be transmitted in a direction concerned.

Claim 8 (currently amended). The network coupling device according to claim 1, wherein said first data access device, said second data access device and said data transmission device form an integrated chip.

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Claim 9 (currently amended). A data home network for transmitting data between a first data processing device and a second data processing device through cabling actually intended for other purposes, comprising:

a network coupling device, containing:

functional components operating on a physical layer of an open system interconnect (OSI) reference model, said ~~function~~ functional components including:

a first data access device, to be coupled to the cabling of the ~~first data processing device~~ home network, for extracting data packets from the cabling and for feeding ~~the~~ data packets into the cabling, while avoiding adverse effects on an actual

intended purpose of the cabling ~~of the first data processing device~~; and

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a second data access device, to be coupled to a transmission medium of ~~the second data processing device~~ a local area network, for extracting ~~the data packets from the second data processing device~~ local area network and for feeding ~~the data packets into the second data processing device~~ local area network; and

a data transmission device operating on a data link layer of the OSI reference model and coupled to said first data access device and to said second data access device, said data transmission device providing an unchanged transmission of extracted data packets between said first data access device and said second data access device without evaluating addressing information concerning the data link layer contained in the data packets.

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